



UNITED STATES PATENT AND TRADEMARK OFFICE

(Handwritten signature)

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,600	02/12/2002	Robert Sultan	FJPR-186XX	4837

207 7590 09/06/2006

WEINGARTEN, SCHURGIN, GAGNEBIN & LEOVICI LLP
TEN POST OFFICE SQUARE
BOSTON, MA 02109

EXAMINER

EL CHANTI, HUSSEIN A

ART UNIT PAPER NUMBER

2157

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/074,600	SULTAN ET AL.	
	Examiner	Art Unit	
	Hussein A. El-chanti	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/02</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. This action is responsive to amendment received on August 3, 2006. Claims 17 and 18 were newly added. Claims 1 and 9 were amended. Claims 1-18 are pending examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Behzadi, U.S. Patent No. 6,728,220.

As to claim 1, Behzadi teaches a data communications network, comprising: an end station; a data communications ring configured for spatial reuse; and a plurality of nodes coupled to the ring, the plurality of nodes including first and second bridges, the first bridge also being coupled to the end station, wherein the second bridge is operative (1) to learn an association between the first bridge and the end station (see col. 1 lines 14-44, switch receives a packet to be routed to an end station), and

(2) upon receiving a packet destined for the end station:

(i) to forward the received packet as a broadcast transmission in a manner indicating that the packet is to be examined by each of the plurality of nodes on the ring

in the event that the association between the first bridge and the end station has not yet been learned (see col. 1 lines 14-44, packet is sent as a broadcast packet on all the ports if no match is found), and

(ii) to forward the received packet as a unicast transmission to the first bridge on the ring in the event that the association between the first bridge and the end station has been learned (see col. 1 lines 14-44, the packet is forwarded to a second bridge if the destination address is found in the table).

As to claim 2, Behzadi teaches a data communications network according to claim 1, wherein the end station comprises an internetworking bridge (see col. 1 lines 14-44).

As to claim 3, Behzadi teaches a data communications network according to claim 2, wherein the interworking bridge provides transparent LAN services via the ring to customers connected to external LAN segments (see fig. 1 and 3).

As to claim 4, Behzadi teaches a data communications network according to claim 1, wherein the ring is a resilient packet ring (see fig. 1 and 3).

As to claim 5, Behzadi teaches a data communications network according to claim 1, wherein the ring is a first ring, and further comprising a second ring, the second ring coupling the first bridge to the end station (see col. 2 lines 27-54).

As to claim 6, Behzadi teaches a data communications network according to claim 1, wherein the end station is a first end station, and further comprising a second

Art Unit: 2157

end station, the second end station being coupled to the second bridge, and wherein the first bridge is operative (1) to learn an association between the second bridge and the second end station, and (2) upon receiving a packet destined for the second end station: (i) to forward the received packet as a broadcast transmission on the ring in the event that the association between the second bridge and the second end station has not yet been learned, and (ii) to forward the received packet as a unicast transmission to the second bridge on the ring in the event that the association between the second bridge and the second end station has been learned (see col. 1 lines 14-44).

As to claim 7, Behzadi teaches a data communications network according to claim 6, wherein the first bridge learns the association between the second bridge and the second end station by monitoring a broadcast transmission of the second bridge on the ring, the broadcast transmission including an identifier of the second bridge as an ingress bridge and an address of the second end station as a source of a message included in the transmission (see col. 2 lines 27-54 and col. 3 lines 7-22).

As to claim 8, Behzadi teaches a data communications network according to claim 6, wherein the ring is a first data communications ring, and further comprising (i) a second data communications ring configured for spatial reuse, the second ring coupling the second bridge to the second end station, and (ii) a third bridge, the third bridge being coupled to both the first and second rings as a backup to the second bridge, and wherein the second bridge is operative to send unicast update messages to the third bridge enabling the third bridge to keep track of the associations learned by the second bridge, and wherein the third bridge is operative upon failure of the second bridge to

Art Unit: 2157

begin the learning of associations and the forwarding of packets on the first ring as broadcast or unicast transmissions depending on whether respective associations have been learned (see fig. 1 and 3).

As to claim 9, Behzadi teaches a method of operating a data communications network having an end station, a data communications ring configured for spatial reuse, and first and second bridges coupled to the ring, the first bridge being coupled to the edge device, comprising: at the second bridge, learning an association between the first bridge and the end station; and at the second bridge, upon receiving a packet destined for the end station: (i) forwarding the received packet as a broadcast transmission on the ring in the event that the association between the first bridge and the end station has not yet been learned, and (ii) forwarding the received packet as a unicast transmission to the first bridge on the ring in the event that the association between the first bridge and the end station has been learned (see col. 1 lines 14-44).

As to claim 10, Behzadi teaches a method according to claim 9, wherein the end station comprises an interworking bridge (see fig. 1 and 3).

As to claim 11, Behzadi teaches a method according to claim 10, wherein the interworking bridge provides transparent LAN services via the ring to customers connected to external LAN segments (see fig. 1 and 3).

As to claim 12, Behzadi teaches a method according to claim 9, wherein the ring is a resilient packet ring (see col. 1 lines 14-44).

As to claim 13, Behzadi teaches a method according to claim 9, wherein the ring is a first ring, and wherein the network further comprises a second ring, the second ring coupling the first bridge to the end station (see fig. 1 and 3).

As to claim 14, Behzadi teaches a method according to claim 9, wherein the end station is a first end station, and wherein the network further includes a second end station, the second end station being coupled to the second bridge, and further comprising: at the first bridge, learning an association between the second bridge and the second end station; and at the first bridge, upon receiving a packet destined for the second end station: (i) forwarding the received packet as a broadcast transmission on the ring in the event that the association between the second bridge and the second end station has not yet been learned, and (ii) forwarding the received packet as a unicast transmission to the second bridge on the ring in the event that the association between the second bridge and the second end station has been learned (see col. 1 lines 14-44).

As to claim 15, Behzadi teaches a method according to claim 14, wherein the first bridge learns the association between the second bridge and the second end station by monitoring a broadcast transmission of the second bridge on the ring, the broadcast transmission including an identifier of the second bridge as an ingress bridge and an address of the second end station as a source of a message included in the broadcast transmission (see col. 2 lines 27-54 and col. 3 lines 7-21).

As to claim 16, Behzadi teaches a method according to claim 14, wherein the ring is a first data communications ring, and wherein the network further comprises a second data communications ring configured for spatial reuse, the second ring coupling the second bridge to the second end station, and a third bridge, the third bridge being coupled to both the first and second rings as a backup to the second bridge, and further comprising: at the second bridge, sending unicast update messages to the third bridge enabling the third bridge to keep track of the associations learned by the second bridge; and at the third bridge, upon failure of the second bridge, beginning the learning of associations and the forwarding of packets on the first ring as broadcast or unicast transmissions depending on whether respective associations have been learned (see fig. 1 and 3).

As to claims 17 and 18, Behzadi teaches a data communication network and method of claims 1 and 9 respectively wherein the packet contains first and second information, the first information indicating an identity of at least one of a source node and a destination node of the packet, the second information indicating an identity of at least one of an ingress node and an egress node for the packet and wherein the second forwarding step includes forwarding the received packet as a unicast transmission to the first bridge on the ring in the event that the association between the first bridge and the end station has been learned, the first information identifying the end station as one of the source node and the destination node of the packet, and the second information identifying the first bridge as one of the ingress node and the egress node for the packet (see col. 2 lines 27-54 and col. 3 lines 7-21).

Response to Arguments

3. Applicant's arguments have been fully considered but are not persuasive.

Applicant argues in substance that Behzadi teaches "flooding" which is different than broadcasting the packet on the ring.

In response, broadcasting is defined by computer dictionary as A transmission to multiple, unspecified recipients. Behzadi discloses a flooding technique where if the destination of the packet is not known, then the packet is forwarded on all the ports without specifying a recipient. Therefore Behzadi's flooding teaches the claimed broadcasting of the packet since the packet is sent on multiple ports without specifying a recipient.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2157

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein A. El-chanti whose telephone number is (571)272-3999. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hussein Elchanti

August 22, 2006


ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100